

**KINGDOM OF CAMBODIA
NATION RELIGION KING**

**Solid Waste and Plastic Management Improvement Project
IDA Credit No. 7292-KH**

TERMS OF REFERENCE

TRANSACTION ADVISORY SERVICES FOR

- a) TRANSACTION ADVISORY SERVICES FOR DEVELOPMENT OF WASTE SERVICE CONTRACTS FOR WASTE COLLECTION, CLEANING AND TRANSPORT SERVICES FOR THE PROVINCES/municipalities OF SIEM REAP/Siem Reap, KAMPONG SPEU/Chbar Mon, KANDAL/Ta Khmau, BATTAMBANG/Thmor Kaul and Bavel district AND SIHANOUKVILLE/Sihanoukville.**

Feasibility assessment; definition of draft municipal waste collection, cleaning, and transport services, performance specifications, related costs and revenue/payment arrangements; development of waste fee model and cost recovery plans.

Development of waste collection, cleaning and transportation service contract template and specific annexes for participating municipalities for the definition of the scope of waste services and performance specifications and related payments for the waste collection, cleaning, and transport service provider.

Assistance to Ministry of Interior and participating provinces/municipalities to include description of services and performance specifications in existing waste contracts and/or request for proposal document preparation with procurement and contracting support.

AND

- b) TRANSACTION ADVISORY SERVICES FOR THE DEVELOPMENT OF WASTE SERVICE CONTRACTS FOR MANAGEMENT AND OPERATION OF LANDFILLS AND WASTE TREATMENT FACILITIES FOR THE PROVINCES OF SIEM REAP, KAMPONG SPEU AND KANDAL**

Development of the description of services and performance specifications for the management and operation for landfill and waste treatment facilities (community material recovery, composting and possibly refuse derived fuel [RDF] production). Determination of costs and applicable gate fee/tipping fee -in collaboration with detailed design engineer-, preparation of request for proposal documents for management and operation service contracts with procurement and contracting support

I. BACKGROUND AND OVERALL OBJECTIVE, COMPONENTS AND STRUCTURE OF THE SOLID WASTE AND PLASTIC MANAGEMENT IMPROVEMENT PROJECT, AVAILABLE LEGISLATION

Background

Solid waste generation in Cambodia has increased substantially over the years as a result of economic growth, urbanization, increases in tourism, and changing lifestyles. Reliable waste data for Cambodia are limited. Total waste generation is estimated to be 4 million metric tons per year, equal to 0.73 kg per person per day.¹

In most cities throughout the country, waste services are largely limited to urban centers and businesses. For Phnom Penh, an average citywide collection rate of 75 percent is reported.² World Bank SWM assessments in secondary municipalities³ suggest collection remains below 50% for households. Organized solid waste collection outside of urban centers is almost non-existent.

For collected waste, proper waste treatment and disposal remains a major challenge. Municipal solid waste is typically disposed of at open dumpsites, with some 164 dumpsites operating countrywide in 2021.⁴ In recent years, for a few cities engineered landfills have been developed.

Uncollected waste is often openly burned, informally buried, or disposed of in the environment and waterways.

In urban areas, 50-60 percent of the waste is estimated to be organic, with plastics and other recyclables accounting for 20-30 percent.⁵ Despite the high share of organic waste, composting facilities are lacking. The waste recovery and recycling industry in Cambodia is dominated by the informal sector, waste pickers are estimated to be responsible for 8 percent of total waste collection. Small-scale recycling facilities exist, however most recyclable waste is exported to Thailand and Vietnam.⁶ The drastic increase of single-use plastics (SUPs) puts immense pressure on waste management services and requires urgent policy measures to reduce plastic pollution through reduction, reuse, and recycling.⁷

Solid waste services are largely outsourced to the private sector with limited or no regulatory oversight. Contracts lack key performance indicators and other essential conditions. Private

¹ EU (European Union). 2019. *Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States*; World Bank; 2020. *What a Waste 2.0*.

² Phnom Penh Waste Management Strategy and Action Plan of Phnom Penh 2018–2035.

³ Siem Reap, Kandal, and Kampong Speu

⁴ Pheakdey, D.V.; Quan, N.V.; Khanh, T.D.; Xuan, T.D. Challenges and Priorities of Municipal Solid Waste Management in Cambodia. *Int. J. Environ. Res. Public Health* 2022, 19, 8458.

<https://doi.org/10.3390/ijerph19148458>.

⁵ Pheakdey et al. 2022.

⁶ <https://cambodiainvestmentreview.com/2022/08/15/2022-waste-summit-highlights-the-informal-sector-of-cambodias-waste-management-ecosystem/>.; <https://globalrec.org/law-report/cambodia/>.

⁷ <https://www.khmertimeskh.com/50648444/ministry-warns-of-rise-in-single-use-plastic-waste-2/>.; <https://www.phnompenhpost.com/opinion/cambodias-plastic-problem>.; <https://asiatimes.com/2020/12/japan-undp-help-cambodia-reduce-marine-plastic-litter/>.

waste companies typically collect fees directly, but do not have the ability to enforce fee collection. Establishing reliable revenue streams is a priority to ensure operating cost recovery and financial sustainability. In selected cities, including Phnom Penh, municipal authorities have started to collect fees from customers, and pay service providers based on contractual arrangements.

The Royal Government of Cambodia (RGC) acknowledges that poor SWM is a critical bottleneck to the country's economic and social development and improving SWM is therefore high on the national agenda. Cambodia's *Law on Environmental Protection and Natural Resource Management* (1996) designates the Ministry of Environment (MOE) as the lead agency for SWM policy making, regulations, and sector coordination. The Ministry of Interior (MOI) is the key agency for supporting the delegation of urban SWM to municipal, city and district administrations. The Ministry of Public Works and Transport (MPWT) is the key agency for public works construction.

Sub-Decree No. 113 (2015) provides the primary legal basis for municipal SWM. It supports efforts to (a) strengthen responsibilities of line ministries, municipal SWM units, and other stakeholders; (b) delegate urban SWM to municipal, city, and district administrations; and (c) determine necessary measures to improve efficiency and safety in SWM. In addition, the *National Waste Strategy and Action Plan for Cambodia (2018–2030)* defines a roadmap for improving waste management practices.

While improvements to the sector are being made, significant challenges remain. Identified priorities for the improvement of solid waste management in Cambodia include: (a) strengthening of institutional capacities (b) development of policies and regulations in line with Sub-Decree No. 113; (c) infrastructure investments along the entire SWM chain; (d) enhancing private sector performance; (e) increase financial sustainability of SWM; (f) integration of waste pickers; and (g) regulation of priority SUPs.

The Solid Waste and Plastic Management Improvement Project has been designed to address these identified priorities.

Below listed are available project background documents.

Title	Availability
Project website	https://projects.worldbank.org/en/projects-operations/project-detail/P170976
Project Information Document	http://documents.worldbank.org/curated/en/099051002242312113/P1709760eb21690e09480020820373729f
Project Appraisal Document	https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099042123162049029/bosib023b4806b0e50b7720a166689ffbd7
Pre-Feasibility Study (pre-FS), incl: conceptual designs for waste infrastructure Siem Reap, Kandal, Kampong Speu; site suitability assessment	The full pre-feasibility report, including conceptual designs and accompanying costs estimates will be shared with the winning consultants.
Environmental and Social Commitment Plan	http://documents.worldbank.org/curated/en/099033123093037121/

Title	Availability
(ESCP)	P17097603340550d0adf00611adfe1abc1
Stakeholder Engagement Plan (SEP)	http://documents.worldbank.org/curated/en/099185502212327877/P1709760d5cd750c0092240f6fd3692bab0
Preliminary Environmental and Social Impact Assessment (P-ESIA)	http://documents.worldbank.org/curated/en/099340301042342591/P17097602016630eb0984f050caf2ea6d39
Resettlement Policy Framework (RPF)	http://documents.worldbank.org/curated/en/099335201042338914/P17097607446500030bb7201d190944a590
Environmental and Social Management Framework (ESMF)	http://documents.worldbank.org/curated/en/099340101042341535/P1709760bb2b060350940d0db2618d8c027
Environmental and Social Review Summary	http://documents.worldbank.org/curated/en/591471585845822998/Concept-Environmental-and-Social-Review-Summary-ESRS-Cambodia-Solid-Waste-and-Plastic-Management-Improvement-Project-P170976
Labor Management Procedures	https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099340001042332578/p17097607fd7ab00908dbe0354324409aa5

Overall objective, components, structure of the solid waste and plastic management improvement project

The overall project's objective is to improve solid waste and plastic management in selected areas in Cambodia. The infrastructure investments in the project, including landfills and waste treatment facilities, will contribute to this objective by reducing deposited waste amounts; increase waste separation and re-use; and mitigate social and environmental impacts of deposited waste.

The key project indicators are:

- Proportion of population in selected areas with regular household waste collection (from 45% baseline to 75% by project closing)
- Landfill disposal capacity operational per defined criteria (cubic meters [m³] based on the estimated landfill capacity required in Siem Reap, Kandal and Kampong Speu)
- Plastics policies, guidelines, or standards developed (of which in alignment with the ASEAN Regional Action Plan) (number: 5)
- Municipal solid waste (MSW) recovered, recycled, composted and/or treated with other techniques in selected areas (from 5% baseline to 15% by project closing)

The project is implemented by three ministries in alignment with their institutional mandates and in accordance with the government's Standard Operating Procedures on project management for all externally financed projects/programs in Cambodia.⁸ The Ministry of Interior (MOI) is the executive agency (EA) of the project and provides overall coordination. A project management unit (PMU) at MOI has been established to implement component 2, and with Technical Support Units (TSUs) in the participating provinces and municipalities. The Ministry of Environment (MOE) has established the project implementation unit (PIU) PIU-MOE to implement

⁸ Royal Government of Cambodia, Standard Operating Procedures on Project Management for All Externally Financed Projects/Programs in Cambodia, 2019.

component 1, and the Ministry of Public Works and Transport (MPWT) has established the PIU-MPWT to implement component 3. Each ministry is responsible for the implementation of the respective components that they are leading and in line with their respective legal mandates.

An inter-ministerial steering committee has been established to ensure inter-ministerial collaboration and coordination across all components and with local administrations. The steering committee is chaired by the MOI and comprise high-level representation from the MOE, MPWT, and Ministry of Economy and Finance (MEF), relevant ministries and respective governors and mayors of the project provinces and municipalities.

There are three main components under the project.

Component 1. Institutional Strengthening for Solid Waste and Plastic Management – implemented by the Ministry of Environment (PIU-MOE). Activities under this component aim at strengthening of institutions, legislation, policies, and regulations for solid waste and plastic management, improve waste management planning, and increase cost-recovery.

Component 2: Integrated Solid Waste and Plastic Management, Planning, Monitoring, and Capacity Building for Participating Provinces and Municipalities - implemented by the Ministry of Interior (PMU-MOI). This component will be carried out in selected provinces and municipalities. These are: Siem Reap, Kampong Speu, Kandal, Battambang, and Sihanoukville⁹. Activities aim at strengthening sub-national capacities in waste management, including the establishment of a waste tariff payment system. Transaction advisory services will be provided to the municipalities to develop improved waste collection service description, financial and waste fee models, payment systems, and key performance indicators and related payments for solid waste collection contracts as well as landfill and waste treatment facilities management and operation contracts (plus gate fee arrangements). Close collaboration by the transaction advisory consultants -under component 2- of the Project with the detailed design consultants – under component 3 of the project- will be required.

The costs for the operation and maintenance for the landfill and waste treatment will be covered through a gate fee that waste collection companies will pay for the treatment and disposal of the waste. Through the developed waste fee model by the transaction advisor, municipalities and MOI will gain understanding to which extent payments from waste generators can recover costs of waste collection and landfill and waste treatment operation and maintenance.

Since payment for waste services is currently low in Cambodia, collaboration between the detailed design engineer -responsible for the design of a cost-effective and low costs maintenance landfill and waste treatment facilities- and the transaction advisor will be required. The transaction advisor is responsible to develop and model suitable levels of payments for waste collection as well as for landfill/waste treatment services and advice on viable waste fee payments systems for waste generators so that financially viable waste services and infrastructure can exist, and the transaction advisor can advise on possibly required future waste

⁹ Their eligibility will be re-confirmed in the first sixteen months of project implementation with support from the Transaction Advisor.

fee increases in the cost recovery plan. The development of software for the payment system for waste services is not part of the scope for the transaction advisor, but the transaction advisor will provide examples and recommendations for development of the waste fee payment system.

The operational costs of the landfill and waste treatment facilities are also an important element of that financial model and likewise keeping waste fees affordable is also an important factor to determine the maximum level of gate fees that can be charged at the landfill and waste treatment facilities, and consequently the maximum amount of operational costs that can be recovered through gate fees. Hence close collaboration between the two consultancies for advisory services and waste facilities design is envisioned.

Component 3: Solid Waste and Plastic Management Infrastructure – implemented by the Ministry of Public Works and Transport (PIU MPWT). Component 3 will finance solid waste infrastructure investments in selected provinces. These are: Siem Reap, Kampong Speu, and Kandal¹⁰. These solid waste infrastructure investments will also include the closing and remediation of existing dumpsites to improve environmental conditions. The activities to be financed under this component will include: (a) detailed design preparation and bidding documents; (b) site-specific ESIA's with ESMPs and other Environment and Social documents; (c) civil works and goods for the construction of the landfill and waste treatment facilities; and (d) and construction supervision. Specifically, the waste landfill and treatment investments will include:

- Investments in landfills with sufficient capacity for a 10-year life span – and aiming to allow additional site expansion for another 10-year life span. The investments in landfills will include the construction of modern, engineered sanitary landfill disposal facilities for non-hazardous municipal solid waste, including leachate and landfill gas capture and treatment systems, other general administrative infrastructure, including access roads. Possibly, the infrastructure will also include the construction of transfer stations, to increase collection efficiencies and increase the area that the landfill can service.
- Closure and remediation of the existing dumpsites, including landfill gas collection systems and treatment of leachate -this is specifically important in Siem Reap.
- Investments aimed at waste reduction and recovery will include:
 - material recovery facilities (MRFs) that will allow incorporation of the existing waste pickers to continue their livelihoods, composting facilities and, possibly, refuse-derived fuel (RDF) production facilities. These facilities are foreseen at the landfill sites and possibly at the existing dumpsite in Kandal.

The material recovery and composting facilities will be designed in a manner that waste pickers can be (voluntarily) integrated into the facilities and without disrupting their livelihoods from collecting recyclables.

Specifically, for Kandal and Kampong Speu, the possibility for RDF production will be confirmed at the stage of the Preliminary Engineering Design and in close coordination with the transaction advisor. The transaction advisor will consult with cement industry and power plants

¹⁰ In Battambang and Sihanoukville the project may finance supporting waste infrastructure other than landfills.

to obtain RDF acceptance criteria and undertake a quick market survey for offtake potential of RDF, specifically from Kandal and Kampong Speu province. The market survey will include potential offtake fees and possible suitable contract structures. The detail design engineer will estimate the investment and operational costs of the RDF facilities as well as the volume of waste that could be reduced through the RDF production and work with the transaction advisor to determine whether it is viable to produce RDF if the operational costs could be covered from the offtake fees.

Available legislation

Legal documents related to urban solid waste management:

- Sub-Decree No.113 (27 August 2015) on Urban Solid Waste Management
- Sub-Decree No.168 (10 October 2017) on the management of plastics
- Sub-Decree No.235 (25 December 2017) on the Management of Drainage and Wastewater Treatment Systems
- Sub-Decree No.25 (16 February 2021) on the Establishment of Urban Solid Waste Management Committee
- Inter-Ministerial Prakas No.073 (06 February 2015) on the Use of Environmental Sanitation Service Budget for the Implementation of Solid Waste Management Functions in Urban Areas of Sub-National Administration
- Inter-Ministerial Prakas No.195(06 June 2018) on Determining the Maximum Fee of Urban Solid Waste Management Services
- Inter-Ministerial Prakas No. 8682 (10 September 2019) on the Management and Use of Transitional Penalties for Violations of the Sub-Decree on Urban Solid Waste Management.

Existing contracts of collection, clean and transportation of solid waste are available and collected from Ta Khmao, Siem Reap and Chbar Mon Municipalities in Kandal, Siem Reap and Kampong Speu provinces respectively and other applicable Cambodian law applicable to service contracts.

II. OBJECTIVES AND MAIN PHASES OF THIS ASSIGNMENT

The purpose of this document is to invite the submission of proposals for providing transaction advisory services to the Ministry of Interior (the Client) for a) waste collection, cleaning and transport services and b) landfill and waste treatment management and operations, in selected cities and provinces in Cambodia.

The work to be undertaken by the advisors (the Consultant) will be: a) to assist the Client to either: i) revise existing contracts with currently operational waste collection service providers to include service description, key performance indicators and expanded waste collection areas with accompanying payment arrangements for waste collection services, or ii) invite newly qualified waste service providers through a transparent and competitive procurement process for waste collection, cleaning and transport cleaning services in the participating provinces/municipalities (5 municipalities); and b) to support contracting of qualified waste

service providers through a transparent and competitive procurement process for the management and operation of landfills and waste treatment facilities in participating provinces (3 provinces).

The activities under the TOR of this assignment will be sufficient for MOI and selected cities and provinces to establish service contracts for a) waste collection and transportation services as well as b) landfill and waste treatment services. This will include the development and definition of the description of services, service specifications for adequate solid waste collection, cleaning and transport, as well as for the management and operation of waste disposal and treatment facilities to receive the collected solid waste, including costs estimates, required service fees and the development of waste fee models for the different categories of waste generators. The consultant will support the Ministry of Interior and the participating provinces/municipalities to include the performance specifications into the existing waste collection contracts, as well as to develop the request for proposal documents for new waste collection contracts and the landfill/waste treatment management and operation contracts. The following phases are distinguished for this assignment.

Upstream (U) waste collection, cleaning, and transport services (5 provinces/municipalities)

1. **Phase U.I: Feasibility assessment and definition of draft Municipal Waste Collection, Cleaning and Transport Services and performance specifications for these services with accompanying costs, payment arrangements, and waste fee model.**
2. **Phase U.II - *(Subject to approval of MOI of the draft Municipal Waste Collection, Cleaning and Transport Services and performance indicators and accompanying costs)* For each of the 5 participating provinces/municipalities: prepare the final description of services for solid waste collection, cleaning and transport services as well as performance specifications, other qualifications, and required contract management and payment arrangements for inclusion into existing contracts and/or preparation of Request for Proposal Documents for new contract tendering. Prepare waste collection, cleaning and transportation service contract template.**
3. **Phase U.III – Supporting MOI and participating provinces/municipalities with (i) inclusion of the description of services and performance indicators and related payments in existing waste collection contracts and/or (ii) Request for Expressions of Interest, Request for Proposal and procurement evaluation support and contract negotiations for new waste collection, cleaning and transport service contracts.**

Downstream (D) waste disposal and treatment services (3 provinces)

1. **Phase D.I: Description of services and performance, management, operations and maintenance specifications for landfill and waste treatment facilities. Determination of accompanying waste disposal and treatment costs and gate/tipping fee and preparation of request for proposal documents,** determination of the description of services and performance indicators for operation, maintenance and management and gate fee for the landfill as well as the material recovery facilities (MRF) and composting facilities including arrangements for continued access to waste pickers to the community MRF and composting facilities. Waste treatment facilities may include functionality for

refuse-derived fuel (RDF) production. This work will be closely coordinated with the detailed engineering consultancy, contracted under MPWT.

2. **Phase D.II – Supporting MOI and participating provinces** with Request for Expression of Interest, Request for Proposal Documents and Proposal Evaluation and contract negotiations for the development of service contracts for the management and operation of landfills and waste treatment facilities.

For overall project implementation efficiency purposes, also to streamline the transaction advisory work, it is envisaged that activities across cities and provinces will be synchronized, so that all five phases presented above can be performed for each city and province largely at the same time (or with a minor shift in time, if that would improve efficiency), and that common approaches and templates can be used for the various tasks in parallel across locations.

III. DETAILED DESCRIPTION OF THE SCOPE OF WORK

The activities under the scope of this TOR will be sufficient to develop the description of services, service specifications for solid waste collection, cleaning and transport services as well as for the operation and management of waste disposal and treatment of the collected solid waste, including costs estimates, applicable services fees and waste fee model for the different categories of waste generators. The costs of the services for waste collection, cleaning and transport services will be estimated under this contract, the costs of services for the landfilling and treatment of waste, including material recovery facilities and composting and possibly refuse derived fuel will be determined initially by the detail design engineer (under separate contract) and reviewed and adopted under the transaction advisory work.

This description of services and performance specifications for waste collection, cleaning and transport can either become part of request for proposal documents for selecting qualified waste service providers or become part of contracts with existing waste service providers. The transaction advisor will support MOI and the participating provinces/municipalities with the incorporation of revised performance specifications and payment arrangements in existing contracts, or preparation of request for proposal and evaluation of proposals and support negotiations for new contracts for these services.

The description of services and performance specifications for management, operations and maintenance of landfills and waste treatment facilities will be included in request for proposal documents. The transaction advisor will support MOI and the participating/municipalities in the development of request for proposal documents, procurement process including evaluations and support contract negotiations.

The detailed tasks are divided in upstream activities for waste collection, cleaning and transportation and downstream activities for waste disposal and treatment and described in the pages below.

UPSTREAM: Waste collection, cleaning and transport services (5 provinces/municipalities)

Phase U.I: Feasibility assessment and definition of draft Municipal Waste Collection, Cleaning and Transport Services and performance specifications for municipal solid waste with accompanying costs, payments and waste fee model. This includes the (i) description of services and performance indicators for the services, (ii) estimation of related investments in equipment and operating costs required to meet these services requirements including for expanding the waste collection service area and accompanying payments for the services, (iii) determination of the accompanying waste fees for different waste generators to improve the cost recovery for the improved waste collection that include also the gate fee costs for the waste disposal/treatment. It also includes the development of a user friendly waste fee model that determines the accompanying waste fees for the different waste generators to improve cost recovery for the waste services with the expanded waste collection service areas and including the gate fees for waste disposal and treatment and preparation of a cost recovery plan for the provinces/municipalities. Participating municipalities should be able to use the waste fee model in the future to determine appropriate waste fees for different categories of waste generators at different waste service levels and account for future developments, such as inflation and changes in waste generation levels and composition.

This task will be undertaken for the participating municipalities and relevant neighboring districts and work will be done with municipal and provincial government administrations of: (i) Siem Reap/Siem Reap, (ii) Kampong Speu/Chbar Mon, (iii) Kandal/Ta Khmau, and (iv) Sihanoukville/Sihanoukville, (v) Battambang/Thmor Kaul and Bavel, under a contract with the Ministry of Interior. The scope of work at the municipalities will include those districts that are relevant in terms of reasonable transport distances to the identified suitable new landfill locations (for the provinces and municipalities: i-iii above) and the already operating landfills (for provinces/municipalities: iv-v above)). The service areas cover all urban parts of the cities, plus those districts in the “catchment” area of the identified suitable landfill locations.

Under the Feasibility Assessment, the Consultant shall provide the following:

Task 1: Existing situation analysis

- ***Waste collection, cleaning and transport services.*** Map, estimate and analyze (i) existing collection, cleaning and transport services offered by existing private waste collection companies, collection systems (door-to-door, collection points, bring systems, type and planning of equipment, mixed/segregated, etc.) including estimated equipment and staffing used for collection, cleaning and transport of waste, as well as the existing operators’ contract provisions with provinces/municipalities (ii) the areas and streets where waste is collected, points of collection, and frequency for the different type of waste generators for the different waste collection companies (iii) amounts and types of waste collected from different type of waste generators; and (iv) estimated existing costs of collection, cleaning and transport waste services and revenues from the different types of waste generators. For this, the consultants will undertake an inspection and survey the municipalities and neighboring districts that are relevant in terms of reasonable transport distances to the identified suitable landfill locations for Siem Reap, Kampong Speu and Kandal and operating landfills for Sihanoukville and Battambang.

- ***Categories of waste generators and estimate of waste types and quantities:*** Overview of type and size of dwellings and buildings as well as estimates of quantities of these different types in the participating municipalities to categorize various types of waste generators and accompanying types and amounts of waste. A specific assessment of commercial, non-hazardous industrial and institutional waste is needed as these waste generators can pay for waste fees and support cost-recovery of waste services. The assessment will also include a limited waste truck counting and waste sorting survey of the solid waste at the existing dumpsite to improve the information on waste amounts and different fractions. The consultants will survey the municipality and key neighboring districts in the provinces that could cost-effectively be part of the “catchment area” of the landfill/waste treatment facility and that can bring the waste services to at least 75% of the households¹¹ as well as other waste generators instead of the estimated 45% of household waste collection services currently offered. Specific attention should be given to include waste collection in areas of public interest, such as parks, near cultural heritage and areas where there is leakage of (plastic) waste to rivers, such as areas close to riverbanks and drains.
- ***Provisions of examples of international experience*** of comparable solid waste collection/cleaning and transport services contracts by waste service companies, including for payment arrangements, performance monitoring and reporting contract conditions as well as enforcement/supervision practices. This will also include the organization of an international study tour of one week for 30 participants¹² for the PMU-MOI and selected participating provinces/municipalities. The consultant will propose suitable waste collection and landfill management contracting experience for the study tour for MOI’s approval. The consultant is expected to bring in and benchmark against relevant and actual functioning practices in South-East Asia and with similar size waste service areas and socio-economic profiles as well as other international experience of key performance and reporting indicators for waste collection, cleaning and transport services, typical costs of collection, cleaning and transport services for similar sized service areas, emerging and successful (waste) fee waste charges by service operators or municipalities with a description of bill collection systems and monitoring, enforcement, reporting and contract payments for waste service companies. This will describe: (i) examples of key performance indicators, typical costs for services and related payments for solid waste collection, cleaning and transport services, (ii) type and typical duration of contracts and key provisions, (iii) different methods for collection of waste fees from waste generators both by provinces/municipality directly or through waste companies or electricity/water tariffs etc. This will include emerging new technologies such as payment apps and waste payment (GIS) systems, specifically the one under development in Phnom Penh; (iv) enforcement of payment of waste fees for solid waste management services from waste generators (v) typical legal provisions in contracts and required per Cambodian law; and (vi) communications, complaints handling, citizen engagement and satisfaction survey’s practices.

¹¹ Increasing the percentage of households with regular waste services in the selected areas to 75% is a results indicator of the Solid Waste and Plastic Management Improvement Project, from the estimated current baseline of 45%.

¹² Travel and per diem costs for the 30 participants will be included as part of consultants’ financial proposals.

- ***Review of Cambodian solid waste management applicable legislation, contracts and contract provisions for existing private waste sector operators and applicable Cambodian service provider legislation, permits, contracts and licenses; and gap analysis with legal and contract requirements based on international good practices.***
Analysis of relevant Cambodian legislation for solid waste service contracts and current service contracts in place in the participating provinces/municipalities with accompanying institutional structure for monitoring, enforcement, reporting and payments arrangements for the contracts with waste service providers. Analysis of the system, institutional set-up, performance indicators, contracts, payments and (waste) fee collection in Phnom Penh, Cambodia. This will include an overview of legal requirements for environment, occupational health and safety (OHS), labor management procedures and social regulations. This will also include experience from private sector service contracts from the water sector and the Public Private Partnership unit within the Ministry of Economy and Finance in Cambodia. This review will result in an overview and legal and performance requirements for the contractual, financial, environmental, occupational, health and safety and social provisions, as well monitoring, enforcement and reporting requirements for the waste service contracts as well as recommendations for improvement of regulatory framework and waste contracts.
- **Assessment of the capacity of participating provinces/municipalities** to adequately plan for, supervise, monitor, and pay for the private sector operator's performance and recommendations. The consultants will analyze the capacity of the provinces/municipalities to adequately plan for, supervise and monitor as well as pay the waste service contracts in terms of contract management, performance management and relationship management as well as monitoring, enforcement and payment. This will include identification of key capacity building needs and development of measures and activities for strengthening and advice on appropriate organizational/operational framework for supervision and monitoring as well as capacity needs for the collection of (waste) fees to pay for the waste services.

Task 2: Feasibility Assessment and definition of draft Municipal Waste Collection, Cleaning and Transport Services and performance indicators; associated costing and service payment arrangements, as well as waste fee recovery from waste generators. Development of waste collection, cleaning and transportation service contract template. Development of user-friendly waste fee model plus costs recovery plans.

For each of the 5 participating provinces/municipalities, the consultant will prepare the following:

- **Updated forecast of waste types and quantities by categories of waste generators from the pre-feasibility study for a 10-year time frame** as input to the definition of suitable solid waste system configuration plan. In addition to overall waste catchment area forecasts, this work will include an estimate of the waste types and quantities generated close to waterways that are estimated to be "leaking" into the waterways and where waste collection services should expand to reduce the environmental pollution. Furthermore, an assessment of possibility to move to container (e.g., euro-bins) collection systems for certain areas/waste generator types, given the existing waste collection equipment of waste service providers and estimated costs and efficiency of waste

collection. This will also include of analysis of feasibility to introduce containers for commercial, non-hazardous industrial and institutional categories of waste generators and could typically pay by volume of waste (per container).

- **Analysis and recommendations for suitable solid waste system configuration plan** in terms of **(a) types of waste to be collected:** (i) waste types to be collected (municipal or household/residential waste); (ii) waste types not to be included; (iii) types of waste to be collected through street cleaning services; **(b) service areas, transportation requirements and transfer sites and waste disposal/treatment sites:** (i) service areas for the different proposed zones for waste collection and cleaning services to allow expansion of services to 75% of the households in the urban areas; (ii) transportation requirements; (iii) location of transfer and/or waste disposal and treatment sites where the collected waste will need to be transported; (iv) gate fees for usage of the transfer/waste disposal and treatment sites (in collaboration with the landfill and waste treatment engineer); (v) prohibition of dumping of waste; (vi) legal basis for municipality to regulate waste management services and impose fee charges; **(c) services to be provided in the different defined zones:** (i) collection services; (ii) planning for container sites in case container-based bring systems are selected; (iii) occupational, health and safety risks and requirements as well as labor conditions and requirements¹³; (iv) street cleaning services in terms of mechanical sweeping, manual sweeping, cleaning of unpaved roads, litter basket services, litter collection from public places and specific emphasis collection areas close to waterways; **(d) collection frequency, hours of collection/holidays:** (i) frequency of collection services; (ii) collection hours; (iii) holidays; (iv) frequency and service hours of collection services; **(e) minimum technical requirements for waste collection and street cleaning equipment and vehicles and availability of vehicles, differentiated between requirements for existing waste contracts and new expected contracts and with accompanying implementation plan and timeframes** –(this will include analysis of potential and costs to introduce more collection and street cleaning vehicles): (i) number of collection and street cleaning vehicles; (ii) dedicated fleet inventory, including registration, license and insurance, maintenance, inspection and appearance; (iii) sanitation, occupational health and safety; (iv) lifetime of collection and street cleaning vehicles and auxiliary equipment, such as fire extinguisher, first aid, protection equipment, communications, (v) loading, hydraulic compaction, maintenance and reserve equipment, (vi) requirements for operations log and reporting and monitoring; (vii) private solid waste collection -outside of service contract provisions- (viii) maintenance facilities; **(f) containers:** (i) provision of containers by the contracting authority (based on analysis of compatibility with vehicles of existing waste collection contractors or as part of new contracts; (ii) inclusion of future containers provision by collection service providers with design standards, volumetric capacity; (iii) compatibility with collection vehicles and handles, lifting and emptying, etc.; (iv) distribution plan and timing; (v) replacement and ownership; **(g) litter baskets:** (i) provision of litter baskets, design standards, volumetric capacity, useful life, distribution plan, maintenance, replacement, ownership; **(h) practice of collection and cleaning:** (i) public safety and convenience; (ii) arrangements where needed for collection at larger private properties;

¹³ See the Environmental and Social Management Framework (ESMF) and the Labor Management Procedures applicable to the project.

(iii) waste fees arrangements; (iv) routes and schedules of collections and street cleaning: **(i): responsibilities and requirements of service users:** (i) acceptable waste (only municipal, domestic waste) and requirements for waste placement; (ii) (waste) fee payments; **(j): public information and citizen engagement, and reporting:** (i) requirements on public information program and annual citizen engagement surveys to measure the satisfaction of beneficiaries with the improved waste collection services and cleanliness; (ii) requirements for technical, environmental, social, OHS and accident reporting etc as well as financial reporting. This includes requirement to report on the amount of streets and households served to measure the improved waste collection and an estimate of the reduction of waste leaking into the environment and waterways (in metric tons) in areas with improved waste collection in the vicinity of waterways and drains; **(k) waste collection and cleaning personnel:** (i) occupational, health and safety equipment, provision of personal protection equipment (PPE), health checks, training, reporting and uniforms; (ii) labor management procedures¹⁴; (iii) competence and skills; (iii) drivers' license and training; (iv) field supervision; **(l) customer service, complaint handling:** (i) hours of complaint handling service; (ii) staffing; (iii) communication equipment requirements; (iv) complaint handling, resolution and service standards for responses to grievances redress, including grievance documentation; and **(m) applicable environmental and social standards and mitigation requirements** for waste collection, transport and methods of how the service provider will dispose of the waste, as per the general good international industry practice and the environmental and social documents applicable to the Project, specifically the labor requirements for the waste collection, transport and cleaning personnel. Adequate stakeholder engagement and consultations will be organized with identified groups of stakeholders as per the SEP.

- **Indication of required types and quantities of containers, collection equipment and vehicles and staffing and associated estimates for investment and operation costs** for the waste collection companies. The estimated costs and options for various types of waste collection services will provide the participating province/municipality and Ministry of Interior with options **to achieve a cost-effective expansion of waste collection and cleaning services to 75 percent of households and the commercial businesses.** Specific attention should be given to the estimates of tourism increase for Siem Reap in the coming 10 years with the new airport and the growing waste in Kandal and commercial, industrial and institutional waste in Kampong Speu and the areas of public interest and close to rivers and drains. Consultants will provide an estimate of the amount of waste collection in areas where currently waste is “leaked” into rivers and drains. It will also include an analysis of possibilities for staged introduction of source-segregated waste streams, specifically organic waste from markets and parks suitable for the composting facility as well as other cost-effective options other waste fractions and

¹⁴ Key objectives of the Labor Management Procedures are to: (i) promote safety and health at work, (ii) promote fair treatment, non-discrimination and equal opportunities of project workers; (iii) protect workers, including vulnerable workers such as women, persons with disabilities, children (of working age), migrant workers, contracted workers, etc (iv) prevent use of all forced labour and child labour; (v) support principles of freedom of association, and collective bargaining, in a matter consistent with national law, (vi) provide accessible means to raise workplace concerns; and (vii) measures to prevent gender based violence, harassment etc.

key waste generators -such as hotels, restaurants, institutional, commercial and industrial generated waste-.

- The Feasibility Assessment will result in **specific proposed draft Design and Operational Requirements for waste collection, cleaning and transport services**. The Feasibility Assessment will define Performance Requirements and collection expansion plan and associated needed costs and service payments as well as waste fee recovery and cost recovery plan for the solid waste collection to come from estimated 45% of waste collection to 75% of waste collection in a cost-effective manner over the next 5 year. The draft Municipal Solid Waste Configuration Plan will describe the phasing of the improvement measures for collection, cleaning and transport services, divided into: (i) immediate measures in 1-2 years; and (ii) medium short-term measures for years 3-5. This will also be based on review of **options for private sector participation in financing for improved collection, cleaning and transport services, specifically for new waste collection equipment and vehicles and possibly containers for commercial, industrial and institutional waste**. This will include a market analysis of the available private sector waste collection companies in Cambodia and active in the 5 participating municipalities and key other relevant regional/international companies and some assessment of their financial strength to the extent possible. Preparation of risk allocation table for possible Public Private Partnership (PPP) scenarios (though likely these would not be PPP model).
- **Preparation of municipal waste fee calculation model and preparation of costs recovery plans for the participating municipalities**. This will be based on the estimated costs of the services for investment and operating costs (that the private waste companies would cover) to accommodate the increasing waste types and quantities and better waste collection and cleaning services in the next 10 years with accompanying suitable service payments for collection, cleaning and transport services. The financial model will include collection costs as well as estimates of costs needed to pay for the gate fee for the proper disposal and treatment of waste. The model will also differentiate the level of waste fees between households and different type of businesses. The model will analyze the financial/budgetary impacts of proposed collection/cleaning service contracts, gate fees at the landfill and waste treatment facilities and the accompanying waste fees for waste generators that are required to move towards greater cost recovery. The fee calculation model should be simple (Excel-based), user-friendly and updatable in the future by the participating provinces and municipalities and ministries. This includes the transfer of the model to the municipalities and MOI and training. At least 2 rounds of training will be organized for the participating municipalities and at national level. One for the draft model and then based on the feedback provided, the second round of training for the final model and cost recovery plans.
- **Analyze and recommend a suitable structure and level of waste fees for different waste generators and waste fee bill collection as well as government enforcement options and associated risks**. The consultant will describe the current waste fee system for waste collection services for the households and businesses that are done by the private waste collection companies. The consultant will calculate the estimated actual waste fee collection rate for the waste generators in different parts of the municipalities and neighboring districts by the existing private waste collection companies. The Consultant will recommend improvements for the waste fee structure and fee collection

system to come to greater cost recovery and allow expansion of waste collection services to approximately 75% of the urban area in the participating municipalities including what regulations revisions are required to effectuate these. This will also implementation and phasing recommendations to move from the current system to a new system with increased government enforcement. The Consultant will advise what level and type of financial commitments are required to pay for the waste services prior to conclusion of legal agreements between parties.

- **Recommendations for contract management, waste fee collection and cost recovery plans.** The transaction advisor will also recommend suitable institutional structure, skills and resources required for contract and performance management for both the waste collection, cleaning and transport service contracts as well as the landfill and waste treatment management and operation contracts. Specific recommendations will also be given on the waste fee payments and the structure, skills and resources required for waste fee billing and collection, depending on suitable bill collection options. The consultant will also prepare cost recovery plans that will clearly identify options for cost recovery for operation and maintenance for the waste disposal and treatment facilities as well as cost recovery for the waste collection contracts. If there are budgeting gaps, the consultant will propose options and timeframe how to reduce/close.
- **Analysis and recommendations on contracts and contracting.** Based on the analysis of the Cambodian legislation, existing waste service contracts and their performance and good international examples, the consultant will provide an overview of advantages, disadvantages and risks related to either revision of existing contracts or tendering for new waste collection, cleaning and transport service contracts in each of the five participating municipalities. The consultant will also prepare a **draft service contract template for waste collection, cleaning and transportation services**, including draft evaluation criteria.

***Phase Upstream (U)I Report.** The Phase UI report will include all results from all tasks (Task 1 and 2) of the Phase U.1. The report will provide the *Feasibility Assessment and Definition of the draft Municipal Waste Collection Cleaning and Transport Services and Performance Specifications, with accompanying costs, payments and payment arrangements and the waste fee model for waste recovery from waste generators.* The Phase U.1 report will also include the *development of a waste collection, cleaning and transportation service contract template and the cost recovery plans for the participating municipalities.**

The client will have four weeks to review and comment on the Phase U.I report.

Phase U.II – *(Subject to agreement of MOI on the Phase U.1 report containing the draft description of services, performance specifications and related costs and payments)* **Prepare the final description of services for solid waste collection, cleaning and transport services as well as performance specifications and related payments for the 5 participating municipalities for inclusion into existing contracts and/or preparation of Request for Proposal Documents for procurement. Development of general waste collection, cleaning and transportation service contract template.**

In Phase U.II, once the MOI with participating provinces/municipalities have taken a decision to approve the definition of Municipal Waste Collection Services, the Service Specifications as

well as the accompanying costs of the service specifications including the Phasing implementation of inclusion of performance indicators into existing contracts as well as procurement strategies for new contracts, the consultant will prepare the final definition and description of the waste collection, cleaning and transport services with performance indicators for each of the 5 municipalities. These will be suitable for inclusion into existing waste collection contracts and/or procurement documents for tendering, depending on the situation in the participating municipalities. The consultants will also develop a general waste collection, cleaning and transportation service contract template.

The Consultant will define the final Municipal Waste Collection Services and the Service Specifications which are proposed to be included in the existing waste collection contracts or request for proposal documents, with clear indication of the expected costs of the service and required waste fees and government budget to achieve such services. In case of still uncertainties, several options with higher service level/higher costs and lower service level/lower costs and the logical zoning of the city into different solid waste collection contracts will be presented for decision by the MOI and participating provinces/municipalities. This will also include a focus on staged introduction of source-segregation, minimizing waste/plastic leakage into the environment and waterways with accompanying provisions and incentives, and to improve cleanliness in key areas.

This includes the recommended specifications for the type of services to be provided by the service providers and addressing all required elements of the service as described above. This also includes the proposed zoning plan for the municipalities and neighboring districts and the recommended different zones for separate contracting. Recommendations for monitoring and enforcement (for example, penalties) and contracting types and conditions.

The consultant will also advise the MOI on the **phasing of the inclusion of performance indicators into existing contracts and/or procurement procedures and strategy** for the contracting of waste collection services for the different defined zones, where experience from the negotiations with existing waste collection companies and procurement procedure for the first selection of waste collection service companies can be incorporated in the subsequent negotiations and procurement procedures. The consultant will also clarify the proposed time frames for starting and concluding the inclusion process for existing contracts as well as procurement process for new contracts for the different zones in the participating municipalities and what this will mean for the length of the recommended continuation of the current waste collection contract process.

For this purpose, the Consultant will review the relevant existing contracts and present an assessment of legal, contractual and commercial options and challenges for opening these contracts, and re-negotiating and agreeing the intended provisions for expansion with system and operational improvements. The consultant will organize at least two workshops with PMU-MOI and the participating provinces/municipalities to (i) present and discuss Municipal Waste Collection Services and the Service Specifications with clear indication of the expected costs of the service and required waste fees and government budget to achieve such services; and (ii) facilitate a decision on the phasing of the inclusion of the performance indicators into existing contracts and/or procurement procedures and strategy for new contracts.

In case consultant recommends the collection system (or part of the city) to move towards a container system (and client agrees and taking into account financial implications on waste fees/tariffs), the consultant should recommend whether containers are to be provided by the waste service provider (and what this would mean for the overall costs and required waste fees and government budget) or if these containers could be provided by the Client/Contracting Authority.

The Consultants will also summarize the information from the Feasibility Assessment to provide the Annex of information to be provided for the Performance Indicators and/or Request for Proposal Documents by the Client/Contracting Agency to the existing waste companies/consultants.

Description of services and performance specifications as well as Request for Proposal preparation for the waste collection, cleaning and transport service contracts. The Consultant shall prepare all the necessary documents to (i) include performance specification and related waste service payments for inclusion into existing waste service contract and/or (ii) undertake a competitive, transparent procurement process for new waste service contracts.

The consultants will also develop a waste collection, cleaning and transport service contract template. For new contracts, this will include the issuance of a Request for Proposals (RFP) designed with clearly defined qualification criteria to determine a successful consultant for the identified number of procurement packages, specifying how many service contracts consultants can win in different participating municipalities.

The Structure of the Service Description, Performance Specifications and Request for Proposal Documents will follow the structure outlined in the Feasibility Assessment above. In addition, the performance specifications and/or request for proposal documents will include the information on taxation, environmental and social requirements and a description of the process to follow with existing waste providers to include the performance indicators in existing contracts as well as for the procurement process: submission requirements, anticipated time schedule, securities etc.

This will include the following information -that will subsequently, upon agreement with the Client, be included in the existing waste collection contracts and/or Request for Proposal Documents- for **Service Contracts for Waste Collection, Cleaning and Transportation Services**:

Schedule 1: Description of the scope of the collection, cleaning and transportation services, consisting of:

- a) Types of waste to be collected
- b) Service area, zoning among other service areas (where relevant), transportation, transfer site and disposal/treatment site
- c) Services to be provided with performance standards
- d) Collection Frequency, hours of collection, holidays
- e) Minimum technical requirements for the collection and street cleaning equipment and vehicles as well as labor (occupational, health and safety, personal protection equipment, labor management procedures).

- f) Containers, if consultants recommend and client agrees that there will be movement towards containerization of waste collection and corresponding waste collection vehicles.
- g) Collection and street cleaning practice
- h) Responsibility and requirements of the service users
- i) Public information and reporting requirements
- j) Waste collection and street cleaning personnel
- k) Customer service, complaint handling and citizen engagement

The Consultant will prepare a service contract template for collection, cleaning and transportation services and prepare specific annexes relevant to the five provinces/municipalities that that can be included in the waste collection contracts and/or request for proposal documents.

The general section for the sample waste collection, cleaning and transport contract will include:

- a) *Legal basis for signing the contract*
- b) *Effective date and term of the contract*
- c) *Definition and explanation*
- d) *Rights and obligations*
- e) *Force majeure*
- f) *Termination by mutual agreement*
- g) *Termination due to service provider breach*
- h) *Termination due to client/contracting authority breach*
- i) *Termination due to force majeure event*
- j) *Applicable law and dispute resolution*
- k) *Other provisions*

The specific annexes for the 5 participating provinces/municipalities will consist of the following:

Annex A: Information to be provided for inclusion in existing waste contracts / request for proposal documents.

1. Description of service area
2. Description of the Characteristics of the waste stream (quantity, composition, density) per different districts.
3. List of container sites, containers, litter bags.
4. Map indicating the foreseen transfer station and/or disposal and waste treatment site and a description of the sites.
5. Description of the street cleaning area and service level (schedule and frequency with detailed specifications and maps).
6. Coordination approach with client in case of special events requiring exceptional waste collection and transportation frequencies.

Annex B: Requirements for the waste collection, cleaning and transport service provider.

Schedule 2: Performance Specifications and Penalties

The consultant will propose the performance specifications with the minimum acceptable level of performance, which should be quantifiable performance specifications corresponding to each service specification and minimum technical requirements to enable the Client/Contracting Authority to monitor the service provider's compliance and performance. *The Performance Standards* should list and provide detailed descriptions of specific performance standards, including quality, safety, and efficiency in the collection, cleaning, transportation, and disposal of municipal solid waste. *Testing and Inspection*: Specify routine testing and inspection procedures to ensure compliance with and achievement of the proposed performance standards. Provisions for malperformance including penalties and corrective actions, arbitration and contract termination.

Schedule 3: Bill of Quantities for waste service payments and payment terms

There are several options for payment to the service provider. Typically, they are lump sum and unit price payment. Currently, unit price payment is assumed. Payments based on unit prices and measurements reflect the extend of work carried out by the service provider. Examples of items to be measured in a collection contract include a unit price for each ton of waste collected (and delivered to the respective disposal site) and/or the number of containers provided and served by the Service Provider. The calculation method for compensation will be specified based on the quantity of collected and transported solid waste, including distance and time required for waste transportation. Payment terms and schedule will also be proposed. The payment schedule will include payment stages and specific timeframes. Payment terms will also include payment methods, payment dates, and any specific payment conditions (if applicable).

Schedule 4: Reporting Requirements.

The consultant will specify the format, frequency and content of the reports that the solid waste collection service provider should submit to the client/contracting authority as well as the dates of submission. The reporting will include technical, environmental, financial as well as labor conditions reporting. Recommendations for monitoring and enforcement by the municipalities and penalty provisions. *Exception Reporting*: Specify how to report and handle exceptional situations, including any violations of performance standards.

Schedule 5: Key personnel and sub-contractors

Consultant is to specify the minimum qualification criteria for the senior staff, such as years of experience in the waste management or similar sector. This will also include labor management specifications (occupational, health and safety, personal protection equipment, labor management procedures) and a labor grievance mechanism.

Schedule 6: Breakdown of contract price.

Consultant will specify specific conditions proposed to include in the contract

Schedule 7: Services to be provided by the Client/Contracting Authority

Consultant will recommend and discuss specific services that the Client/Contracting Authority will provide.

Preparation of detailed implementation action plan to define all the required actions/steps and time required to incorporate performance indicators into existing waste collection contracts and/or implement successful tendering, consultant' selection and contracting of service contracts

for solid waste collection and cleaning (or a combination in municipalities when multiple zones are applicable).

The Consultant will present clearly the conclusions and recommendations to the Client regarding decisions to be made by the Client regarding waste service level and costs and timeframe of the process to include performance specifications and payment into existing waste collection contracts and/or Request for Proposal Preparation and procurement process with a clear overview of key decisions to be made by the Client including required timeframe.

***Phase Upstream (U). II Report:** the Phase U.II report will include all activities under Phase U.II. This will include the final description of services for solid waste collection, cleaning, and transport services as well as performance specifications and related payments for the 5 participating municipalities for inclusion into existing contracts and/or preparation of Request for Proposal Documents for procurement. It will also include the development of general waste collection, cleaning, and transportation service contract template with the specific annexes relevant for the five municipalities. The detailed implementation plan will also be part of the Phase U.II report.*

The client will have four weeks to review and comment on the Phase U.II report.

Phase U.III – (Subject to decision of MOI and participating provinces/municipalities on most suitable manner to establish contracts with service description and performance specifications and payments) Supporting MOI and participating provinces/municipalities (5 provinces/municipalities) with (i) inclusion of the description of services and performance indicators in existing contracts and/or (ii) Request for Expressions of Interest, Request for Proposal Document preparation, Proposal Evaluation and Contract Negotiations. The Consultant¹⁵ will assist the Client in the following activities for each of the contracts and/or procurement procedures for the different zones in the different participating municipalities as agreed with the Client:

- (i) **Inclusion of the performance indicators and related service payments in existing waste collection, cleaning and transport service contracts, and/or**
- (ii) **Request for proposal preparation and support in procurement process for new waste collection, cleaning and transport service contracts:**
 - a) **Request for Expressions of Interest and possibly Market Testing,** including Qualification criteria for the proposed procurement procedure for the collection/cleaning service contract. The purpose of the Expression of Interest is to test the market for interest of Waste Collection, Cleaning and Transport Service Providers and get comments on the draft contract and service

¹⁵ The consultant will uphold the highest standards of integrity and provide an unbiased, independent viewpoint; provide expert advice that is objective and is based on documented information, discussions, and field observations; maintain records of their work and their findings; report on their work in a professional and timely manner; and maintain the confidentiality of any information or documents pertaining to proprietary processes of prospective investors or the Client.

specifications. This Request for Expressions of Interests typically includes an outline with baseline information and envisage contractual arrangements and conditions as well as the service specifications so that market interest can be tested and comments received that can be included in the final Request for Proposal documents.

- b) **Finalization of Request for Proposal following the Expression of Interest and possible market testing:** Following the Expression of Interest phase to test market interest and obtain comments on the draft contract and service specifications, the Consultant will finalize the Request for Proposal as prepared in Phase U.II. Since there are more than 1 province/municipality with possibly a new contract for waste collection, cleaning and transport services, the consultant will also advice and agree with MOI on the tendering strategies for the municipalities, specifically in terms of bundling Request for Proposals for service contracts for municipalities or separating. Once the Request for Proposals are released to the market the consultant will support the Client to organize a pre-proposal conferences and site visit for short-listed consultants; give presentations on the procurement process and technical matters.
- c) **Questions & Answers:** maintain a register of questions submitted by qualified consultants, draft answers for the Client, and, at least 20 days prior to the proposal date, submit the questions and approved answers to all qualified consultants; and
- d) **Successful Service Provider (Consultant):** evaluate the submissions and deliver a Proposal Evaluation Report and recommend technically qualified consultants as service providers to the Client.
- e) **Support Contract Negotiations.**

Phase U.III. Phase U.III will support to MOI and participating provinces/municipalities with (i) inclusion of the description of services and performance indicators in existing contracts and/or (ii) Request for Expressions of Interest, Request for Proposal Document preparation, Proposal Evaluation and Contract negotiations support. **The Phase U.III completion report** will present the finalization of the revision of existing contracts and/or the procurement assistance for the preparation and support for request for expression of interests, proposals and finally assistance to MOI on the procurement.

DOWNSTREAM: Waste disposal and treatment services (3 provinces: Siem Reap, Kampong Speu and Kandal)

Phase D.I – Description of draft services and performance specifications for the management and operation of the landfill and waste treatment facilities. Determination of accompanying waste disposal and treatment costs and tipping/gate fee (based on estimates of the detailed design engineer). Preparation of request for proposals for landfill management and operation service contracts. Determination of financial liability of the pollution of current dumpsites. Transaction advisory services for the development of waste service contracts for management, operation and maintenance of landfills and waste treatment facilities. This will consist of: (i) defining the description of services and the performance specifications for management, operation and maintenance of the landfills and waste treatment facilities (community material recovery, composting facilities and possibly RFD production); (ii) Determination of operational and maintenance costs to be covered under the gate/tipping fee-with the detailed design engineer in charge of the detailed design of the landfill and waste treatment facilities. These are foreseen to be primarily based on the operational costs of landfill and waste treatment facilities management and operation; and (iii) preparation of request for proposals for landfill and waste treatment management and operation service contracts. This task will be undertaken in close coordination with the detailed design engineers that are contracted under MPWT. The following activities will be undertaken:

1. **Work and collaborate closely with the MPWT and the detailed design consultants/engineers for the landfills and community material recovery and composting facilities and possibly RDF facilities** that will be contracted by the MPWT. The preliminary engineering design for the landfill and the waste treatment facilities together with the associated operation and maintenance costs will be an input from the detailed design consultant to the transaction advisor to determine the description of services and performance indicators for the landfill and waste treatment management and operation and determine the applicable gate/tipping fee for appropriate operation and maintenance of the facilities.
2. **Review applicable legislation, regulations, existing landfill contracts and policies related to waste disposal and treatment as well as good international practice for landfill service contracts** to determine legal obligations, permits and licensing requirements etc. This also includes the environmental and social management obligations for landfill and waste treatment operation, including OHS and labor management procedures. Undertake a gap analysis of the Cambodian obligations in comparison with current waste dumpsite practices. It will also include an international study tour to 1-3 functional relevant landfill management companies in South-East Asia that have functional gate fee collection, contracts with clear service description and performance indicators as well as a good institutional set-up with the province/municipality for monitoring, reporting and payment arrangements. The study tour will be one week for an estimated 30 participants from PMU-MOI and selected provinces, this can be combined with the study tour for international experience for waste collection contracts.

The Consultant will prepare a service contract template for maintenance and operation services for the disposal and treatment of waste and prepare specific annexes relevant to

the three provinces that that can be included in the waste disposal and treatment request for proposal documents.

Once a service contract template and the specific draft annexes relevant to the three provinces have been prepared together with the cost implications, the transaction advisor will organize a round of trainings and stakeholder consultations to discuss the drafts. The main options for the arrangements will be investigated and reporting, including comparison of landfill operation and maintenance by public company versus private company. The consultant will investigate and report on the main options for arrangements between the stakeholders to own, manage and operate the landfill and waste treatment facilities or require services from these facilities, and any financial or operational risk for each of the stakeholders that may affect the sustainability of operations or the interest of stakeholders. The consultant will address these risks and propose provisions in the proposed arrangements to eliminate or mitigate these risks. As part of this task, the consultant will investigate to what extent the increases in waste disposal and treatment costs to the municipalities/central government and subsequently the municipal citizens and other waste generators may impose financial risks to the operator and the new waste management arrangements.

The consultant will advise what level and type of financial commitments are required (e.g. budget decisions or gate fee arrangements including gate fee enforcement or an incentive scheme to pay, such as “put-or-pay mechanism”) prior to conclusion of any legal arrangements between the parties. It is foreseen that multiple rounds of discussions, training and meetings (at least 3) will be required at central and provincial level to reach agreement on the main organizational, financial and management structure of the new waste disposal and treatment facilities.

Long term draft service contracts for waste disposal and treatment will be drafted for the waste disposal and treatment facilities in Siem Reap, Kandal and Kampong Speu. These will be valid under Cambodian law and with an appropriate structure for compliance and reporting to the authorities that can be established.

The general section for the sample waste disposal and treatment contract will include:

- a) Legal basis for signing the contract
- b) Effective date and term of the contract
- c) Definition and explanation
- d) Rights and obligations
- e) Force majeure
- f) Termination by mutual agreement
- g) Termination due to service provider breach
- h) Termination due to client/contracting authority breach
- i) Termination due to force majeure event
- j) Applicable law and dispute resolution
- k) Other provisions

The specific annexes for the three participating provinces (Siem Reap, Kandal and Kampong Speu) will include the following:

1. Determine the overall **description of services and performance and operations specifications** to enable successful tendering for the management, operation and maintenance and the subsequent proper management and operation of the landfill and waste treatment facilities in line with international good practices. These description of services and performance and operations specifications will be included **in the request for proposal to procure the service contract for the landfill and waste treatment facility management and operation. This will include the following items:**
 - a. **Operate, maintain and manage the new landfill facility** to: (i) receive, sort, store and dispose of the waste, including waste acceptance criteria. The sorting will be done in a community Material Recovery Facility that is part of the main area of the facility and provide a safe location where existing waste pickers will be allowed to continue to sort and collect recyclables under appropriate OHS conditions and provide accompanying skills training. In addition, there will be a composting facility where informal waste workers are paid to produce compost for non-food purposes (and landfill cover layers) from the collected and sorted mixed waste; (ii) dispose of the solid waste within the new landfill; (iii) compact and cover the solid waste that is disposed; (iv) collect, treat and monitor leachate in the leachate treatment facility, both from the landfill operations as well as from the old leachate pond from the existing dumpsite (applicable to Siem Reap); (v) collect, monitor and discharge (and possible use) gas from the landfill and keep a monitoring record of the landfill gas facility that can be validated and certified for Emission Reduction Credits; (vi) fence and secure the new landfill facility and keep a registry to allow existing registered waste picker access to the community material recovery and composting facilities. Prevent unauthorized access of other persons and unauthorized access in the landfill disposal area. (vii) mitigate and monitor potential environmental and social impacts, including but not limited to odors, litter, pests, insects, rodents, birds, and traffic safety from the waste transport trucks on the access roads.
 - b. Acceptance procedures for the volume of waste and confirmation procedures for acceptance and payments.
 - c. Manage the new landfill facility and develop a comprehensive maintenance program for the facility including programs for periodic inspections, repairs, replacements of equipment and facilities as applicable, and prepare and manage a community health and safety plan for the nearby communities.
 - d. Develop and manage programs to train and advance the skills of operators, other personnel and the skill training for the existing waste pickers that will be allowed to continue to sort waste in the community material recovery facility and operate the composting facility¹⁶.

¹⁶ Existing waste pickers will be allowed to sell the sorted recyclables in order to avoid disruptions of livelihoods. The Operator will provide trainings to the waste pickers to improve skills, such as: (i) technical trainings for improved waste sorting in the material recovery facility as well as compost facility; (ii) OHS trainings for improved working conditions; (iii) other skill trainings to improve capacities of waste pickers to improve employability in waste sector and within the landfill management and operation. Specific trainings will be developed and provided for the woman waste pickers to improve employability with the landfill management and operation and elsewhere in the waste or other sectors and gender equality. Existing waste picker children in the age group 14-18 years could possible also undertake some work in the facility, provided that the work is non-hazardous and not interfering with

- e. Carry out all customer relations and service functions including weighing of waste received by the new landfill facility, monitoring the landfill gas facility to allow for emission reduction validation and certification and assisting the owner of the facility in the solid waste billing and collection functions of the owner as will be required under the contract.
 - f. Plan and manage the implementation of repair and rehabilitation plans.
 - g. Provide period reports on the operation and management of the facility and the other monitoring requirements.
 - h. Carry out all management, financial and administrative responsibilities related to the new landfill facility.
 - i. Environmental and social management and monitoring
 - j. Specifications for end-of-contract hand-over of facilities and equipment.
2. **Plans, programs, operating procedures, and operating and training manuals to be developed by the landfill operator.** Determine the technical specifications for the plans, programs, operating procedures and operating manuals that the landfill operator shall develop and implement plans. This will include training to the national and local government for monitoring, inspection of the landfill operators. It will also include training to the prospective landfill operators after the procurement procedures, The plans will also include requirements to develop closure and rehabilitation plan.
 3. **Repair, replacement, and rehabilitation.** Determine the operations specification for the repair, replacement and rehabilitation of the new landfill facility (equipment, structures) and site.
 4. **Financial, administrative and regulatory management.** Determinate the operations specifications for the operator to: (i) keep proper accounts according to good international practices; (ii) day to day information system management; (iii) preparation of reports required by government authorities and regulators; (iv) management of permits and licenses.
 5. **Inventory management requirements**
 6. **Gate fee/tipping fee, including mechanisms to ensure collection of the gate fee and payment terms (for instance put-or-pay mechanism).** In close collaboration with the detailed design engineer, MPWT, MOI, MEF and the participating provinces/municipalities to determine the appropriate gate fee/tipping fee for the customers of the facility and the generation of revenues for the management and operation of the facility and the operations specifications for the operator to collect and report the gate fees/tipping fees. Determination of gate fee: monthly unit rate in respect to the operations services and payment procedures, performance incentive compensation, liquidated damages, securities, taxes and duties. The Consultant will provide relevant examples of international experience of gate fee charges by landfill operators, including enforcement of gate fee payment and/or waste disposal obligations. Gate fees should be

school, such as further segregation and packaging of first order sorted recyclables, cleaning of rest and cleaning facilities, non-machinery work with compost etc. Work conditions will abide by ILO standards, good industry practice and the Environmental and Social Management Framework and LMP of the project. The landfill and waste treatment facility operator will be responsible to undertake age verification and registration and supervise appropriate OHS conditions and provide specific skill training for children 14-18 years and women. Trainings will include awareness raisings on sexual exploitation and abuse/sexual harassment, as well as information on lodging complaints and reaching out to the facility operator and government focal points.

sufficient for the proper operation and maintenance costs of the facilities and should include an incentive scheme to pay, such as a put-or-pay mechanism. The consultant will also assess financial or operational risks that may affect the sustainability of operations or the interest of the stakeholders and propose provisions in the proposed arrangements to mitigate these risks.

7. **Reporting and records.** Requirements for the records keeping by the operator and quarterly and annual reports by the operator, including but not limited to: (i) progress reports; (ii) report on the performance of the operator as measured by the performance and operations specifications, such as amount of treated waste, residues, waste disposed, fuel consumption, utilities used, operation days and hours (to be defined as per performance specifications) ; (iii) environmental and social monitoring report including information on landfill gas collection and emissions registrations¹⁷, leachate collection and treatment; groundwater, surface water quality including neighboring wells, reports on OHS compliance for landfill facility workers and informal waste workers/pickers, pest control, water control, security, litter, dust, noise emissions, community health and safety, including on access roads; (iv) report on physical inspection and safety deficiencies as well as accident reporting; (v) financial report in respect to operations and maintenance costs; (vi) revenue, billing and collection report including data with respect to unpaid accounts; (vii) information about the volume of waste delivered at the new facility, sorted and compost material produced, volume of waste disposed and compaction rate; (viii) summary of complaints received, responses and response times and proper grievance redress mechanism.
8. **Obligations of the landfill owner, recommendation on public or private company structure and recommendation of arrangements with the private waste collection company's and provinces/municipalities and ministries.** For the obligation of the owner this includes owner's assistance to the operator, access to the site and facility, reviews and approvals of submissions. This also includes discussion and recommendations of placement of the landfill asset in accordance with Cambodian law and practices and in coordination with MOI and the Ministry of Economy and Finance. Drafting of articles of association and registration in case decided as suitable for the ownership of the company which may also be required for the operations and maintenance to be placed by private operator in case the company will be the main counterpart for the private company. In relation to private companies' structure, this includes definition and specification of the relationship between (i) the waste collection and transport companies and (ii) the landfill and waste treatment management and operation companies, as well as (iii) the provinces/ municipalities.
9. **Contract administration, supervision, and inspection,** including owner's and operators' representatives, operator's personnel and sub-contractor's requirements.
10. **Liability and risk distribution, guarantees, insurance, warranties etc.**
11. **Suspension and termination.**

Financial liability of the pollution of current dumpsites. In addition to the new landfill and waste treatment facilities, the consultant will assess the financial liabilities of pollution of current dumpsites in collaboration with the detailed design engineer contracted under MPWT. The

¹⁷ Emission registration should allow for validation and certification of emission reductions.

transaction advisor will provide an estimate of the determination of financial liabilities of the pollution of the current existing waste dumpsites and provide support to MOI, General Department of Resettlement (GDR) and the participating provinces in land transfer arrangements of the current dumpsites to allow for closure and remediation of these sites. This includes drafting of legal documents for transfer of land.

Phase D.I report – *The report will include all activities under Phase D.1. This will include a description of the draft services and performance specifications for the management and operation for the landfill and waste treatment facilities. Determination of accompanying waste disposal and treatment costs and tipping/gate fee. This determination will be based on estimates of the preliminary engineering design made by the detailed design engineer. The report will also include the preparation of request for proposals for landfill management and operation service contracts. It will also include the determination of financial liability of the pollution of current dumpsites, in close collaboration with the detailed design engineer.*

The client will have four weeks to review and comment on the Phase D.I report.

Phase D.II – *(Subject on agreement from MOI on the draft description of services, performance standards and accompanying gate fee and payment terms and incentives as described in the Phase D.I report). **Supporting MOI and participating provinces (3 provinces) with Request for Proposal preparation, Proposal Evaluation and support for contract negotiations.*** Once the final description of services, performance specifications and associated costs and gate fee/tipping fee as well as the institutional company structures have been agreed with the client, the consultant¹⁸ will assist the client in the procurement process for the new landfills and waste treatment management and operation service contracts, with the following activities:

- a) **Request for Expressions of Interest and Market Testing**, including Qualification criteria for the proposed procurement procedure for the management and operation service contract. The purpose of the Expression of Interest is to test the market for interest of waste disposal and treatment service providers and get comments on the draft contract and service specifications. This Request for Expressions of Interests typically includes an outline with baseline information and envisage contractual arrangements and conditions as well as the service specifications so that market interest can be tested, and comments received that can be considered for preparing the final request for proposal documents.
- b) **Finalization of request for proposal Documents following the Expression of Interest and Conference**: Following the Expression of Interest phase to test market interest and obtain comments on the draft contract and service specifications, the Consultant will finalize the Request for Proposal Documents. Once the Request for Proposal Documents are released to the market the consultant will support the Client to organize a conference and site visit for short-listed consultants; give presentations on the procurement process and technical matters;

¹⁸ The consultant will uphold the highest standards of integrity and provide an unbiased, independent viewpoint; provide expert advice that is objective and is based on documented information, discussions, and field observations; maintain records of their work and their findings; report on their work in a professional and timely manner; and maintain the confidentiality of any information or documents pertaining to proprietary processes of prospective investors or the Client.

- c) **Procurement assistance.** Questions & Answers: maintain a register of questions submitted by qualified consultants, draft answers for the Client, and, at least 20 days prior to the proposal date, submit the questions and approved answers to all qualified consultants; and further procurement assistance.
- d) **Proposal Evaluation Report:** evaluate the submissions and deliver a Proposal Evaluation Report to the Client.
- e) **Support for contract negotiations**

Phase D.II –the Phase D.II will support MOI and participating provinces (3 provinces) with Request for Proposals, Proposal Evaluations and Procurement assistance as well as assistance to contract negotiations for operation and maintenance contracts for the landfills and waste treatment facilities. The Phase D.II completion report will present the finalization of the procurement assistance for the preparation and support for request for expression of interests, proposals and finally assistance to MOI on the procurement for the landfill and waste treatment facilities operation and maintenance contracts.

IV. SUMMARIZED DELIVERABLES

The Consultants will work daily under the direction of the PMU-MOI in Phnom Penh, as well as with the participating provinces and municipalities Siem Reap/Siem Reap, Kandal/ Ta Khmau and Kampong Speu/ Chbar Mon, Battambang/ Thmor Kaul and Bavel district and Sihanoukville/ Sihanoukville.

All reports will be in English and Khmer language.

Monthly Progress Reports for both upstream and downstream: Progress reports should be provided to the Client every 4 weeks following contract signature. The progress reports should present a very brief overview of progress in completing the task dates, difficulties in achieving the work as described in the contract, proposed alternate means to achieve the project objectives, status of budget and major scheduled milestones, any proposed modifications to the contract mandate. It is anticipated that progress reports would be some 5 pages in length.

UPSTREAM: Waste collection, cleaning, and transport services (5 provinces/ municipalities).

Inception Report Upstream. This report shall consist of a detailed review and analyze of all available studies, legislation, and existing contracts and as much as possible of information from the existing information and good international examples for collection, cleaning, and transport service contracts. The inception report will also include a detailed workplan for the consultants to undertake all activities in the upstream phase to come from the existing situation to the new situation and lay-out in detail the planned rounds of discussions and meetings and decisions that will be required to reach agreement on the main technical collection configuration, organizational, financial, and management and reporting structures and accompanying contracts.

Phase U.I Report. The report will include all results from all tasks (Task 1 and 2) of the Phase U.1. The report will provide the Feasibility Assessment and Definition of the draft Municipal

Waste Collection Cleaning and Transport Services and Performance Specifications, with accompanying costs, payments and payment arrangements and the waste fee model for waste recovery from waste generators. The Phase U.I report will also include the development of a waste collection, cleaning and transportation service contract template and the cost recovery plans for the participating municipalities. The client will have four weeks to review and comment on the Phase U.I report.

Phase U.II Report: Subject to agreement of MOI on the Phase U.I. report, the Phase U.II report will include all activities under Phase U.II. This will include the final description of services for solid waste collection, cleaning, and transport services as well as performance specifications and related payments for the 5 participating municipalities for inclusion into existing contracts and/or preparation of Request for Proposal Documents for procurement. It will also include the development of general waste collection, cleaning, and transportation service contract template with the specific annexes relevant for the five municipalities. The detailed implementation plan will also be part of the Phase U.II report. The client will have four weeks to review and comment on the Phase U.II report.

Phase U.III *Subject to the decision of MOI and participating provinces/municipalities on the most suitable manner to establish contracts with service descriptions and performance specifications and payments.* The Phase U.III will include the support to MOI and participating provinces/municipalities with (i) inclusion of the description of services and performance indicators in existing contracts and/or (ii) Request for Expressions of Interest, Request for Proposal Document preparation, Proposal Evaluation and Contract negotiations support. The Phase U.III completion report will present the finalization of the revision of existing contracts and/or the procurement assistance for the preparation and support for request for expression of interests, proposals and finally assistance to MOI on the procurement.

Downstream: Waste disposal and treatment services (3 provinces)

Inception report Downstream. This report shall consist of a detailed review and analyze of all available studies, legislation, and existing contracts and as much as possible of information from the existing information and good international examples for landfill and waste treatment facilities management and operation contracts and accompanying ownership, payment, and management structures. The inception report will also include a detailed workplan for the consultants to undertake all activities in the downstream phase to come from the existing situation to the new situation and lay-out in detail the planned rounds of discussions and meetings and decisions that will be required to reach agreement on the main technical, organizational, financial, and management and reporting structures and accompanying contracts for the new waste management contracts.

Phase D.I report – The report will include all activities under Phase D.I. This will include a description of the draft services and performance specifications for the management and operation for the landfill and waste treatment facilities. Determination of accompanying waste disposal and treatment costs and tipping/gate fee. This determination will be based on estimates of the preliminary engineering design made by the detailed design engineer. The report will also include the preparation of request for proposals for landfill management and operation service contracts. It will also include the determination of financial liability of the pollution of current

dumpsites, in close collaboration with the detailed design engineer. The client will have four weeks to review and comment on the Phase D.I report.

Phase D.II – *Subject to agreement of MOI on the Phase D.I. report*, the Phase D.II will support MOI and participating provinces (3 provinces) with Request for Proposals, Proposal Evaluations and Procurement assistance as well as assistance to contract negotiations for operation and maintenance contracts for the landfills and waste treatment facilities. The Phase D.II completion report will present the finalization of the procurement assistance for the preparation and support for request for expression of interests, proposals and finally assistance to MOI on the procurement for the landfill and waste treatment facilities operation and maintenance contracts.

All deliverable reports should be submitted to the Client according to the time schedule set out below. The number of hard copies is 10 copies.

In addition, one soft electronic copy (portable document format) of each report shall be provided to the Client and donors.

Deliverables	Timeline Weeks to completion (cumulative)
Upstream Waste collection, cleaning and transport services (5 municipalities)	
Contract signature	0
Inception report upstream	8
Phase U.I Report: Feasibility Assessment and Definition of draft Municipal Waste Collection Cleaning and Transport Services and Performance Specifications, with accompanying costs, payments, and waste fee model	16
<i>Comments issued by client</i>	20
Phase U.II Report: Final description of services for solid waste collection, cleaning, and transport services as well as performance specifications and related payments for the 5 participating municipalities for inclusion into existing contracts and/or preparation of Request for Proposal Documents for procurement. Development of general waste collection, cleaning, and transportation service contract template	24
<i>Comments issued by client</i>	28
Phase U.III: Draft inclusion of the description of services and performance indicators in existing contracts and/or draft Request for Expressions of Interest Request and Request for Proposal and procurement assistance. Completion report for activities under Phase U.III.	48
Downstream: Waste disposal and treatment services (3 provinces)	
Inception report downstream	8

Phase D.I – Description of draft services and performance specifications for the management and operation for the landfill and waste treatment facilities. Determination of accompanying waste disposal and treatment costs and tipping/gate fee (based on estimates of the detailed design engineer). Preparation of request for proposals for landfill management and operation service contracts. Determination of financial liability of the pollution of current dumpsites.	28
<i>Comments issued by client</i>	32
Phase D.II –Supporting MOI and participating provinces (3 provinces) with Request for Proposals, Proposal Evaluation, procurement assistance and assistance to contract negotiations. Completion report for activities under Phase U.II.	52 (synchronized with construction works for landfill and waste treatment facilities)

V. SPECIFIC INPUTS TO BE PROVIDED BY THE CLIENT

The following services and facilities will be provided by the Client without cost to the Consultant.

Data. The Client will provide the Consultant with access to all available data, information, maps, drawings and internal documents relevant to the consulting services. All reference material will be loaned to the Consultant and shall be returned at the completion of the assignment or earlier, as may be requested.

Access. The Client will arrange for access by the Consultant to sites in connection with performing its duties.

Counterpart staff at PMU-MOI and provincial/municipal levels to assist with project coordination, technical aspects (as needed).

Two pick-up vehicles for official business trip and Office spaces including office equipment.

VI. ORGANIZATION, QUALIFICATIONS AND EXPERIENCE

The consultant will have demonstrated international experience with transaction advisory services for the environmental sector (waste or water/wastewater) in a developing country context -preferably as a lead advisor of the assignment and preferably in the waste sector. At least 10-15 years of international experience is required. Experience in the South-East Asia region is required and at least three references for transaction advisory services should be provided, with information on the results related to the conclusion of service contracts, references covering both waste collection and waste disposal/treatment contracts (or PPP for

waste disposal/treatment) is needed. At least 2 similar assignments shall have been undertaken in the last 8 years and preferably in similar socio-economic conditions as in Cambodia. Experience in procurement in compliance with multilateral development bank guidelines.

Specifically, the Consultant will be required to demonstrate the following expertise: (1) At least 10-15 years of international experience and international track record of transaction advisory services for both solid waste collection, cleaning and transportation (service) contracts and landfill and waste treatment facilities (service) contracts (or PPPs) in emerging markets, specifically South-East Asia. At least three references for transaction advisory services¹⁹, and at least two references in the last eight years and preferably in similar socio-economic conditions as Cambodia. References should include both waste collection and waste disposal/treatment contracts (or PPP). (2) solid waste, financial and procurement expertise in the solid waste collection and landfill management sectors and contracting of such services, including experience in procurement in compliance with multilateral development bank guidelines; (3) (municipal) finance and urban infrastructure financial modelling expertise having experience modelling solid waste collection costs/waste tariffs and/or municipal/government budget; and (4) familiarity with the legal and regulatory environment in Cambodia and familiarity with the solid waste collection and disposal systems and governance structure in Cambodia.

Minimum Qualifications and Key Responsibilities for key experts.

Key expert 1: International Team Leader - Solid Waste Collection Services Specialist

Qualifications and experience: International Team Leader - Solid Waste Collection Services Specialist is expected to have at least a graduate degree in civil or environmental engineering, solid waste or environmental management or related fields; 15 years of international experience in solid waste management, specifically with proven and practical experience in setting up/facilitating collection, cleaning and transport waste (service) contracts and definition of waste collection, cleaning and transport services, performance indicators and related costs and payments. The specialist should have practical experience in facilitating the process of selecting suitable operational and commercial arrangements for collection, cleaning and transport (service) contracts, and supporting negotiations of final arrangements (including financial and legal)

Tasks and key responsibilities: International Team Leader - Solid Waste Collection Services Specialist will be responsible for (but not limited to) the following:

As a Team Leader:

- Lead the Team and be responsible for overall management and administration of the consultant team, the planning and implementation of the assignment in close coordination with the Project Manager and the MOI-PMU and liaising with other government counterparts – specifically the Technical Support Units under the participating provinces/municipalities, consultants and other ministries and stakeholders.

¹⁹ With information on the results related to the conclusion of the transaction advisory services into contract establishment.

- Prepare a comprehensive, high quality inception plan, Lead and prepare the Phase U.I; Phase U.II and Phase U.II studies and reports, acceptable to government and with comments from World Bank and in a timely manner based on the workplan and as per requirements.
- Ensure the documents prepared are in strict compliance with government and World Bank's Environmental & Social standards.
- Prepare a workable staffing plan, define a program and rational timeline describing each major stage of assignment including obtaining requisite governmental approvals.

As a Solid Waste Collection Services Specialist:

- Lead and undertake the Feasibility assessment and definition of the draft Municipal Waste Collection, Cleaning and Transport Services and performance specifications for these services under Phase U.I.
- Lead and prepare the final description of services for solid waste collection, cleaning and transport services, as well as performance specifications, other qualifications, and required contract management and payment arrangements under Phase U.II
- Lead the support MOI and the participating provinces/municipalities in Phase U.III with (i) inclusion of the description of services and performance indicators and related payments into existing waste contract and/or procurement process to procuring new waste collection, cleaning and transport service contracts.

Key expert 2: International Deputy Team Leader and Solid Waste Landfill and Waste Treatment Service and Management Specialist

Qualifications and experience: At least a graduate degree in civil or environmental engineering, solid waste or environmental management or related fields. 15 years of international experience in solid waste management, extensive experience with operation of landfill and waste treatment infrastructure and setting up/facilitating landfill disposal and waste treatment (service) contracts. This includes proven experience with setting up/facilitating financial, organizational and legal arrangements and agreements for sustainable operation and maintenance of solid waste entities for treatment and disposal of waste. The specialist should have practical experience in facilitating the process of selecting the best applicable operational and commercial arrangements for the landfill and waste treatment facilities and supporting negotiations of final arrangements (including financial and legal).

Tasks and key responsibilities: Solid Waste Landfill and Waste Treatment Service and Management Specialist – Deputy Team Leader (International) will be responsible for (but not limited to) the following:

- Assist the Team Leader and facilitate in to perform all aspects of his duties and responsibilities for overall management and administration of the consultant team, implement the assignment, coordinate with other consultants -specifically the detailed design engineers for the landfill and waste treatment facilities - etc and timely and quality deliverables under the Terms of Reference.
- Lead and undertake the description of the services and performances, management, operations and maintenance specifications for the landfill and waste treatment facilities.

Lead the determination of accompanying waste disposal and treatment costs -in coordination with the detailed engineers- and gate/tipping fee and preparation of request for proposal documents under Phase D.I.

- Lead the support to MOI and the participating provinces in Phase D.II with the procurement process to procuring services contracts for the management and operation of landfills and waste treatment facilities.

Key expert 3: National Solid Waste Collection Services Specialist

Qualifications and experience: Solid Waste Collection Services Specialist - is expected to have at least a graduate degree in civil or environmental engineering, solid waste or environmental management or related fields; 7 years' experience in solid waste management, specifically waste collection analysis. Experience with collection, cleaning and transport waste services and service' contracts and definition of waste collection, cleaning and transport services and performance indicators would be preferable. Work experience with projects funded by international finance institutions shall be preferred, Khmer language requirement.

Tasks and key responsibilities: Solid Waste Collection Services Specialist will be responsible for (but not limited to) the following:

- Support and undertake the Feasibility assessment and definition of the draft Municipal Waste Collection, Cleaning and Transport Services and performance specifications for these services under Phase U.I.
- Support preparation the final description of services for solid waste collection, cleaning and transport services, as well as performance specifications, other qualifications, and required contract management and payment arrangements under Phase U.II
- Support the Team Leader in the support MOI and the participating provinces/municipalities in Phase U.III with (i) inclusion of the description of services and performance indicators and related payments into existing waste contract and/or procurement process to procuring new waste collection, cleaning and transport service contracts.

Key expert 4: National Solid Waste Landfill and Waste Treatment Service and Management Specialist

Qualifications and experience: At least a graduate degree in civil or environmental engineering, solid waste or environmental management or related fields. 7 years' of experience in solid waste management, Experience with landfilling and waste treatment and landfill disposal waste treatment service contracts would be preferable. Work experience with projects funded by international finance institutions shall be preferred, Khmer language requirement.

Tasks and key responsibilities: National Solid Waste Landfill and Waste Treatment Service and Management Specialist –will be responsible for (but not limited to) the following:

- Assist the Team Leader and facilitate in to perform all aspects of his duties and responsibilities for overall management and administration of the consultant team, implement the assignment, coordinate with other consultants -specifically the detailed

design engineers for the landfill and waste treatment facilities - etc and timely and quality deliverables under the Terms of Reference.

- Lead and undertake the description of the services and performances, management, operations and maintenance specifications for the landfill and waste treatment facilities. Lead the determination of accompanying waste disposal and treatment costs -in coordination with the detailed engineers- and gate/tipping fee and preparation of request for proposal documents under Phase D.I.
- Lead the support to MOI and the participating provinces with the procurement process in Phase D.II to procuring services contracts for the management and operation of landfills and waste treatment facilities.

Key expert 5. International (Municipal) Finance and urban infrastructure financial modelling specialist.

Qualifications and experience: At least a graduate degree in (municipal) finance, urban infrastructure financial modelling or related fields. International experience with (municipal) finance and urban infrastructure financial modelling and solid waste financial planning/ cost recovery (financial model/tariff formulation) is a requirement, with a minimum of 10 years of experience. This includes efficient public systems of costing, accounting and billing. Experience with management/institutional development of solid waste systems both for operation and maintenance of systems and infrastructure, including options for private sector involvement, financing or Public Private Partnerships. Experience in South-East Asia is required.

Tasks and key responsibilities: International (Municipal) Finance and urban infrastructure financial modelling specialist –will be responsible for (but not limited to) the following:

- **Upstream: Waste collection, cleaning and transport services:** (i) Preparation of the municipal waste fee calculation model and preparation of cost recovery plans for the participating municipalities; (ii) analyze and recommend a suitable structure and level of waste fees for different waste generators and waste fee bil collection as well as government enforcement options and risks.
- **Downstream: Waste disposal and treatment services** (i) Gate fee/tipping fee analysis, including mechanisms to ensure collection of the gate fee and payment terms; (ii) Determination of financial liability of pollution of current dumpsites.

Key expert 6. National (Municipal) Finance specialist.

Qualifications and experience: At least a graduate degree in public financial management, public administration or related fields. At least 7 years of experience in local governance, finance and budgeting in Cambodia. The expert for this position preferably should both have worked in the public sector in a capacity as public financing specialist with experience in infrastructure development and public services financing, and in addition have gained experience in advisory activities. The national (municipal) finance specialist is expected to closely work with and advise the International (Municipal) Finance and Urban Infrastructure Financial Modelling Specialist. Khmer language requirement

Tasks and key responsibilities: the national (Municipal) Finance specialist –will be responsible for (but not limited to) the following:

- **Upstream: Waste collection, cleaning and transport services:** Assist the international (municipal) finance and urban infrastructure financial modelling specialist in (i) the preparation of the municipal waste fee calculation model and preparation of cost recovery plans for the participating municipalities; (ii) analyze and recommend a suitable structure and level of waste fees for different waste generators and waste fee bill collection as well as government enforcement options and risks.
- **Downstream: Waste disposal and treatment services** Assist the international (municipal) finance and urban infrastructure financial modelling specialist in (i) Gate fee/tipping fee analysis, including mechanisms to ensure collection of the gate fee and payment terms

Key expert 7: International environmental or/solid waste service contracts and procurement of service contracts’ specialist.

Qualifications and experience: At least a graduate degree in law, finance, accounting, business administration, environment or related fields Minimum of 10 years of international experience in preparation and successful completion of procurement processes for service contracts for environmental services and infrastructure, specifically in the solid waste sector and preferably both in solid waste collection as well as solid waste disposal/treatment. Experience with international finance institutions and World Bank procurement guidelines is an advantage and preferably in socio-economic conditions similarly to Cambodia.

Tasks and key responsibilities: The international environmental/solid waste service contracts, and procurement of service contracts’ specialist –will be responsible for (but not limited to) the following:

- **Upstream: Waste collection, cleaning and transport services:** (i) Develop the waste collection, cleaning and transport service contract template, including the specific annexes for the five participating provinces/municipalities; (ii) support MOI and participating provinces/municipalities with (a) inclusion of the description of services and performance indicators in existing contracts and/or (b) prepare the request for expression of interests, market testing request for proposal documents, proposal evaluation and support to contract negotiations.
- **Downstream: Waste disposal and treatment services** (i) Develop and prepare the service contract template for waste disposal and waste treatment, including the specific annexes for the three participating provinces for the waste disposal and waste treatment facilities; (ii) support MOI and the three participating provinces with request for expression of interests and market testing, request for proposal documents, proposal evaluation and support to contract negotiations.

Non-key experts:

National Contract Lawyer. At least a graduate degree in law degree, political science or related fields. With at least 7 years of experience in Cambodia in the establishment of service contracts

in water or waste sectors or establishment of public entities and in contract management. Khmer language requirement.

National Facilitator. With 7 years of experience in Cambodia in facilitating meetings, discussions and negotiations at national and local government level. Khmer language requirement.

In addition to professional inputs shown above, the Consultant shall be required to depute adequate support staffs as required to fulfill the requirements under the TOR.

The work will require an extensive field presence in Phnom Penh and the participating provinces/municipalities, Cambodia. Given the size and complexity of the project, the Client expects the Consultant to maintain a significant time presence of its senior experts, including its Project Manager unless otherwise agreed with the Client.

VII. LEVEL OF EFFORT AND TYPE OF CONTRACT

Indicative staff and staff months

The following table provides an indicative estimate of the human resources required.

The composition and indicative minimum levels of effort required are listed below. However, the Consultants should make their own estimates of resources required to complete the assignment satisfactorily.

Key expert No.	Position	Person-months	
	<u>Upstream: Waste collection, cleaning and transport services</u>	International	National
1	International Team Leader/Solid Waste Collection Services Specialist	6	
3	National Solid Waste Collection Services Specialist		6
5	(Municipal) Finance and urban infrastructure financial modelling specialists (International)	4	
6	(Municipal) Finance and urban infrastructure financial modelling specialist (National)		5
7	Service contract and procurement of service contract specialist (international)	4	
	Supporting experts, such as national contract lawyer and national facilitator	5	15
	Sub-total	19	26
	<u>Downstream: Waste disposal and treatment services</u>		
2	International Deputy Team Leader/Solid Waste Landfill and Waste Treatment Service and Management Specialist	6	
4	National Solid Waste Landfill and Waste Treatment Service and Management Specialist		6
5	(Municipal) Finance and urban infrastructure financial modelling specialists (International)	2	
6	(Municipal) Finance and urban infrastructure financial modelling specialists (National)		3
7	Service contract and procurement of service contract specialist	3	
	Supporting experts, such as national contract lawyer and national facilitator	4	16
	Sub-total	15	25
	Total	34	51

The assignment is envisaged to start within three weeks of the signing of a contract with the selected consultant. The estimated level of effort for the work is as per the above table.

The contract will be a standard lump-sum contract. The payment will be made to consultant upon successfully completion of each output outlined in the Summarized Deliverables list.

CONFIDENTIALITY

The Consultant agrees to keep confidential all information that it receives, directly or indirectly, from Ministry of Interior, Ministry of Public Works and Transport, Ministry Economy and Finance, Ministry of Environment, provinces and municipalities, as well as all copies or analyses that it makes, or have been made by third parties, on the basis of such information. The Consultant shall use the materials exclusively for the purpose of this assignment. The confidentiality obligations shall not apply to information in the public domain. The Consultant shall only permit access to the materials to persons within its organization and affiliated firms on a need-to-know basis.